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B137 New cytotoxic cembranoid diterpenes from the soft corals Nephthea sp. and Sarcophyton sp.

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Two soft corals, Nephthea sp. and Sarcophyton sp., collected from the Fiji Islands and the Great Barrier Reef were investigated. After extraction with CH_2Cl_2 and MeOH, the organic extracts of the two soft corals were evaluated for biological activity. Simultaneous with these assays, investigation of the secondary metabolite chemistry of the samples was started. Chromatographic separation of the extracts using normal and C_{18} reversed phase VLC, SPE, and HPLC yielded three new cembranes from the Sarcophyton sp. (1-3), and two new seco-cembranoid acetates from the Nephthea sp. (5 and 6), together with the known compounds sarcoglaucol (4) and decaryiol. All structures were elucidated using IR, UV, EHMS, 1 H-NMR and 2D-NMR techniques (HSQC, H,H-COSY and HMBC). Among the numerous cembranoids already isolated from coelenterates compounds 1, 2, and 3 represent rare examples of cembranoids functionalized at C-19. Compounds 1, 3, and decaryiol were found to be cytotoxic towards several tumor cell lines (Gl_{50} values ranged from 0.15 to 8.6 µg/ml).

B138 New and biologically active imidazole alkaloids from two sponges of the genus Leucetta

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Chemical investigation of two sponges, Leucetta chagosensis and Leucetta cf chagosensis, collected from the Great Barrier Reef and the Fiji Islands, respectively, has led to the isolation of three new imidazole alkaloids (1-3), along with the known compounds isonaamine B (4) and naamine A (5). The structures of the new compounds (1-3) were elucidated by employing spectroscopic techniques (NMR, MS, UV, and IR). The structures of the known compounds 4 and 5 were determined by comparison of their ¹H and ¹³C NMR spectroscopic data with published values. Compounds 1 and 2 were found to be cytotoxic towards several tumor cell lines (Gl₅₀ values ranged from 1.3 to 7.0 µg/mL).